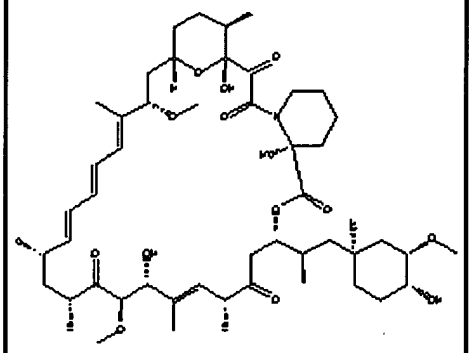
Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	929	(210/634).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:07
L2	338	(540/456).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:07
L3	0	1 and 2	US-PGPUB; USPAT	OR	ON	2005/04/07 15:07
L4	2	1 and (rapam$ OR ascom$ OR FK506)	US-PGPUB; USPAT	OR	ON	2005/04/07 15:10
L5	427	(422/256).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:10
L6	0	5 and 2	US-PGPUB; USPAT	OR	ON	2005/04/07 15:11
L7	10	2 AND ("extraction column" "countercurrent" "counter current")	US-PGPUB; USPAT	OR	ON	2005/04/07 15:22
L8	1	("4894366").PN.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:23

Rapamycin [53123-88-9]
Synonyms: Antibiotic AY 22989; AY 22989; Rapamycin; RAPA, Rapamune; Sirolimus;



Tools

BUY AT CHEMACX.COM
VIEW CHEMDRAW STRUCT
VIEW CHEM3D MODEL

CAS RN Lookup

THE MERCK INDEX
HCI DATABASE

OpenChem

VIEW LINKS
ADD COMPOUND
ADD/CHANGE PROPERTY
ADD LINK

Formula	$C_{51}H_{79}NO_{13}$	Molecular Weight	914.184
CAS RN	53123-88-9	Melting Point (°C)	
ACX Number	X1000584-2	Boiling Point (°C)	
Density		Vapor Density	
Refractive Index		Vapor Pressure	
Evaporation Rate		Water Solubility	
Flash Point (°C)		EPA Code	
DOT Number		RTECS	
Comments	Schreiber, S.L. et al. J. Org Chem. 1992, 57, 5058-60		

More information about the chemical is available in these categories:

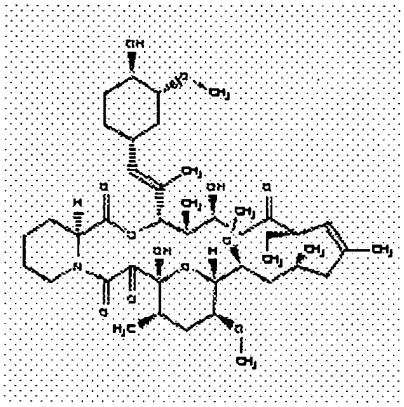
Health (1)
UMCP Partial list of mutagens

Medications (2)

ChemIDplus Lite Record

Tox. & Env. Health TOXNET Return to Results Page

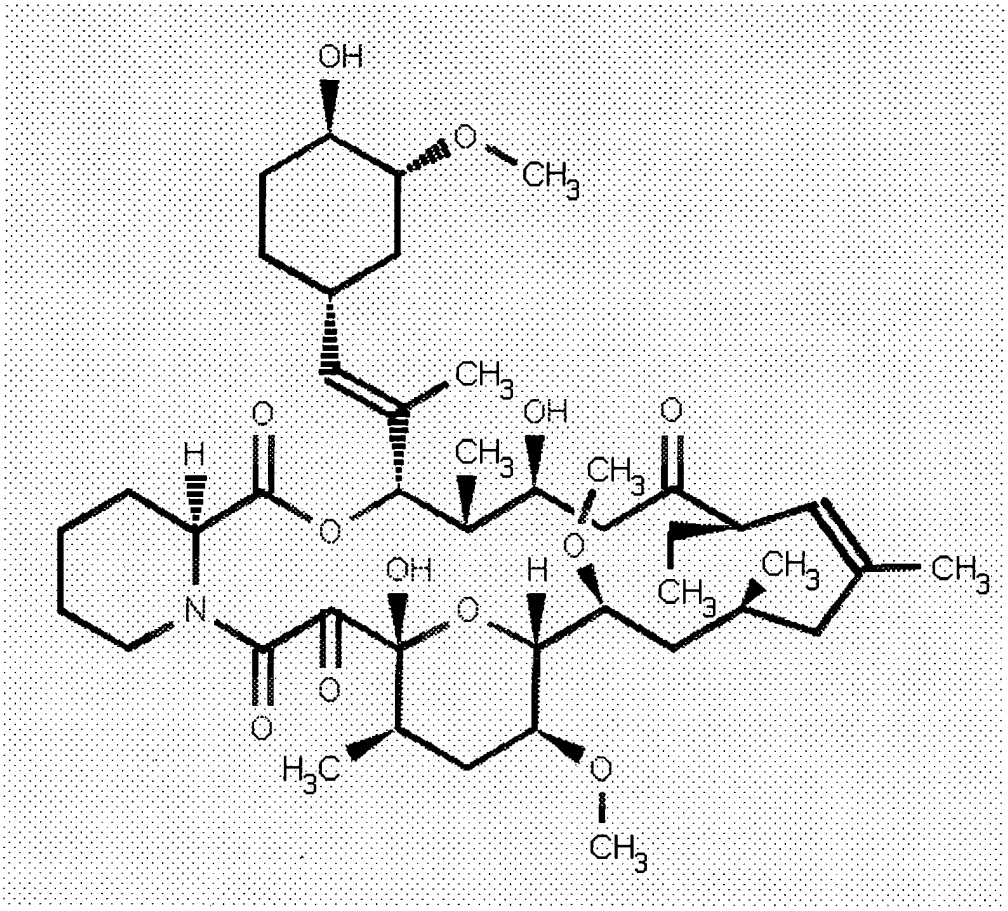
Ascomycin
RN: 11011-38-4



Enlarge Image

Synonyms
NSC-106410

Systematic Name
Ascomycin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N
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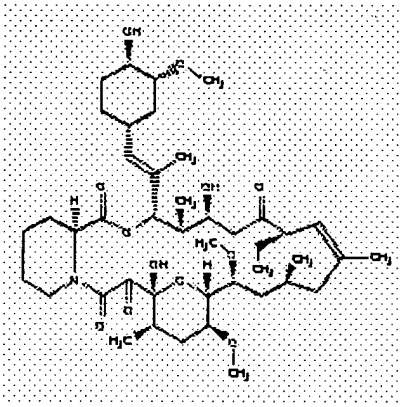
CH3

ChemIDplus Lite Record

Tox. & Env. Health TOXNET Return to Results Page

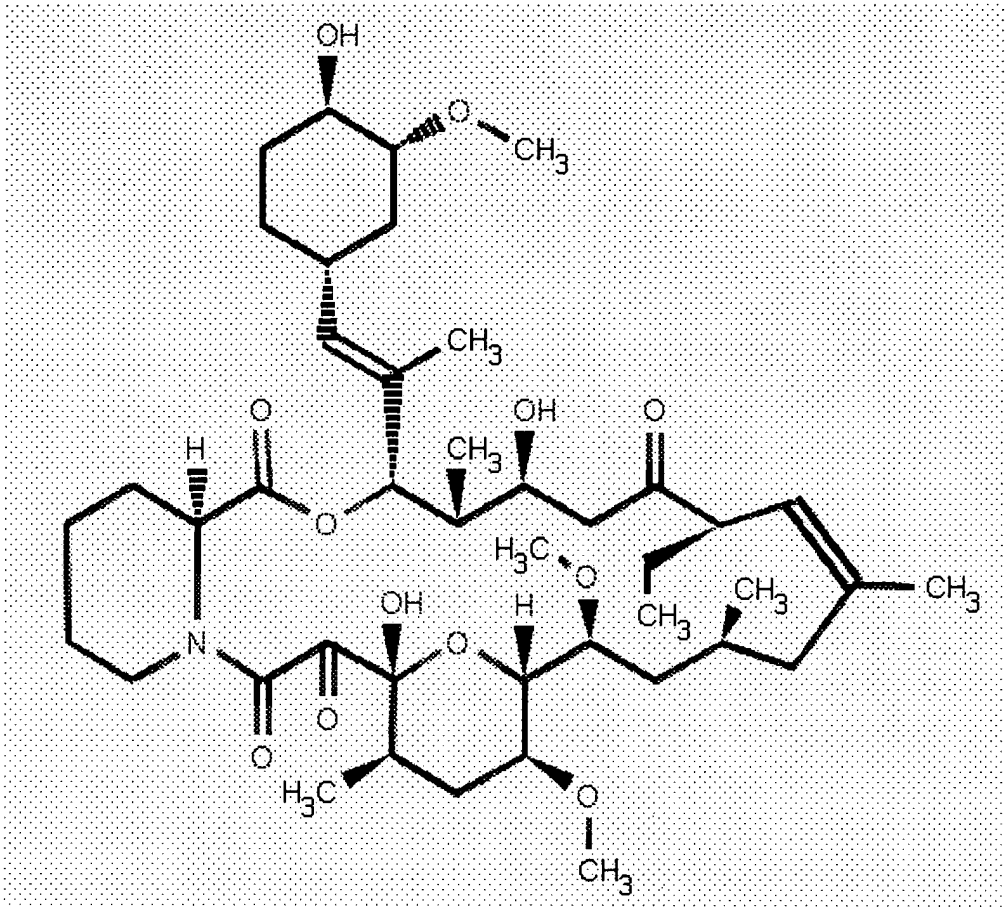
FR 900520
RN: 104987-12-4



Enlarge Image

5-40/456

Molecular Formula
C43-H69-N-O12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CH3
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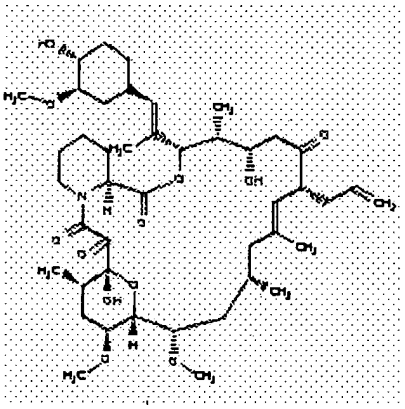
N
O
O
O
O
H3C
O
CH3

ChemIDplus Lite Record

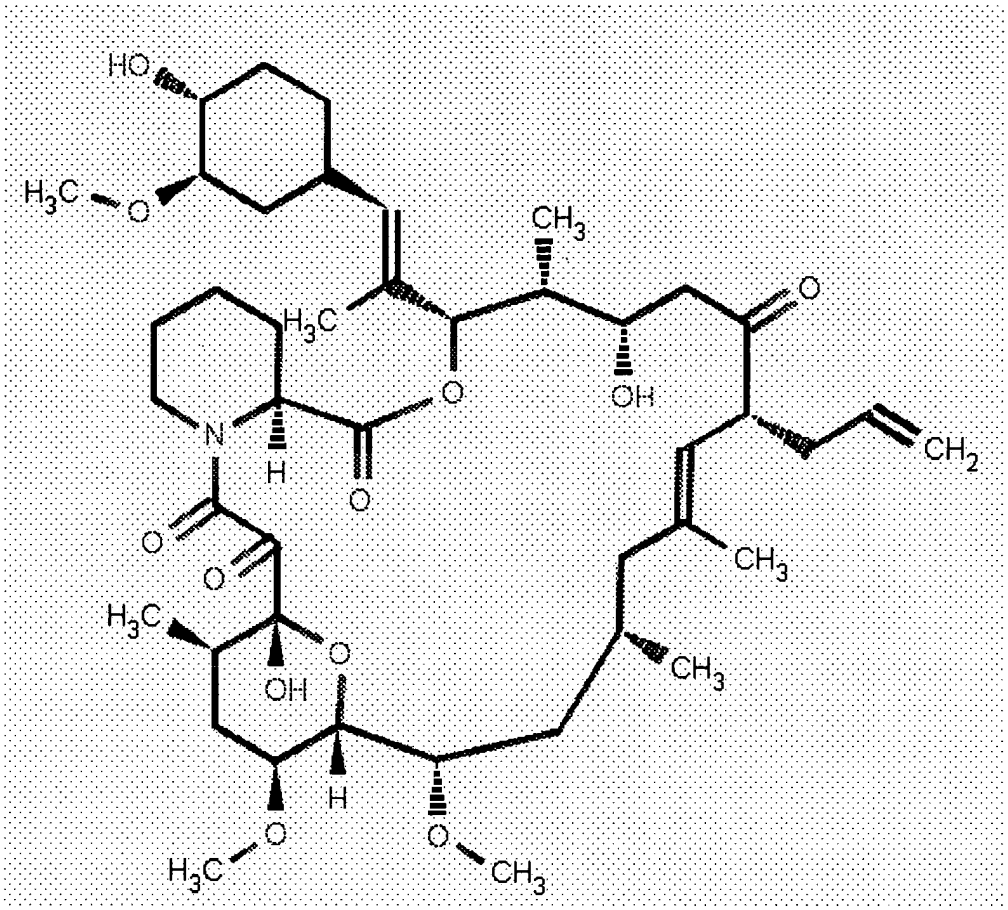
Tox. & Env. Health TOXNET Return to Results Page

Tacrolimus [USAN:BAN:INN]
RN: 104987-11-3



Enlarge Image

Molecular Formula
C44-H69-N-O12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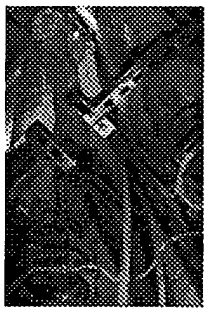
O
CH3

Tacrolimus (FK506)



Tacrolimus (FK506) Purity>99%

Tecoland supplies Tacrolimus (FK506), at the highest purity (> the market, for research use. We also supply Ascomycin (FK5 other Tacrolimus analogs.

Tecoland also supplies bulk quantity cGMP grade Tacrolimus 99.4%. USDMF can be filed upon request.

Product	Purity	Quantity	Catalog #	P
Tacrolimus	>99%	1mg	TAC99-1	$6
Tacrolimus	>99%	5mg	TAC99-5	$1
Tacrolimus	>99%	10mg	TAC99-10	$1
Tacrolimus	>99%	25mg	TAC99-25	$2

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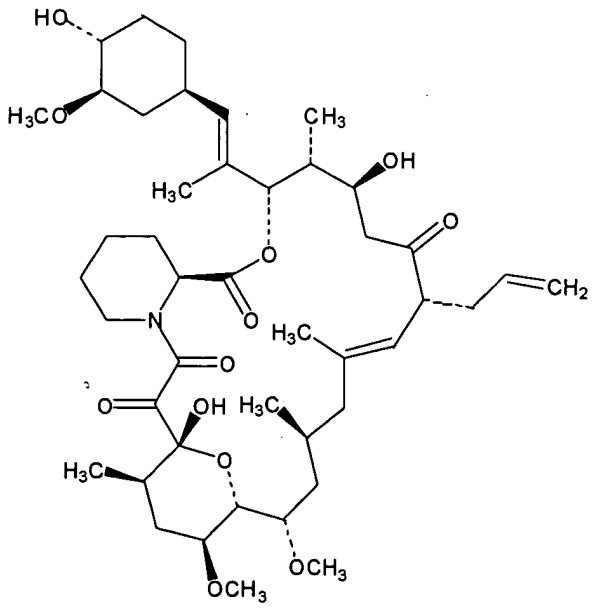
Immunosuppressive agents

Mycophenolate mofetil Rapamycin(Sirolimus) Tacrolimu

Patented products available for research and development use a under CFR 35 section 271(e)(1)

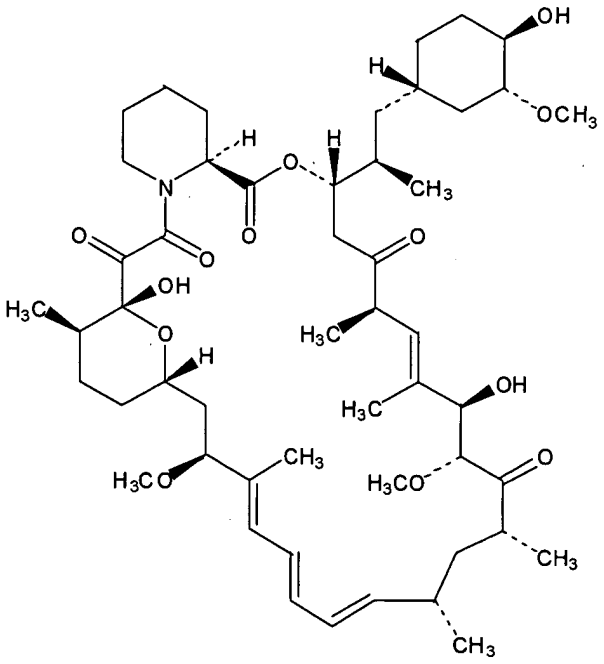
Monograph number: 09117
Title: Tacrolimus
CAS Registry Number: 104987-11-3
CAS Name: (3*S*,4*R*,5*S*,8*R*,9*E*,12*S*,14*S*,15*R*,16*S*,18*R*,19*R*,26a*S*)-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-Hexadecahydro-5,19-dihydroxy-3-[(1*E*)-2-[(1*R*,3*R*,4*R*)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-15,19-epoxy-3*H*-pyrido[2,1-*c*][1,4]oxaazacyclotricosine-1,7,20,21(4*H*,23*H*)-tetrone
Additional Names: 17-allyl-1,14-dihydroxy-12-[2-(4-hydroxy-3-methoxycyclohexyl)-1-methylvinyl]-23,25-dimethoxy-13,19,21,27-tetramethyl-11,28-dioxa-4-azatricyclo[22.3.1.$0^{4,9}$]octacos-18-ene-2,3,10,16-tetraone
Molecular Formula: $C_{44}H_{69}NO_{12}$
Molecular Weight: 804.02
Percent Composition: C 65.73%, H 8.65%, N 1.74%, O 23.88%
Literature References: Macrolide isolated from *Streptomyces tsukubaensis* no. 9993: M. Okuhara *et al.*, **EP** 184162 (1986 to Fujisawa); and characterization: T. Kino *et al., J. Antibiot.* **40,** 1249 (1987). Structure determn: H. Tanaka *et al., J. Am. Chem. Soc.* **109,** 5031 (1987). Total synthesis of (-)-form: T. K. Jones *et al., J. Am. Chem. Soc.* **111,** 1157 (1989). *In vitro* immunosuppressant activity in comparison with cyclosporin, *q.v.*: T. Kino *et al., J. Antibiot.* **40,** 1256 (1987). Toxicology: K. Ohara *et al., Transplant. Proc.* **22,** 83 (1990). Symposium on pharmacology and clinical trials: *ibid.* **23,** 2709-3376 (1991). Review of mechanism of action: G. Wiederrecht *et al., Ann. N.Y. Acad. Sci.* **696,** 9-19 (1993); of clinical trials in comparison with cyclosporin in renal transplantation: G. A. Knoll, R. C. Bell, *Br. Med. J.* **318,** 1104-1107 (1999). Review of use in dermatoses: A. K. Gupta *et al., J. Eur. Acad. Dermatol. Venereol.* **16,** 100-114 (2002).



Derivative Type: Monohydrate
CAS Registry Number: 109581-93-3
Manufacturers' Codes: FK-506 ; FR-900506
Trademarks: Prograf (Fujisawa) ; Protopic (Fujisawa)
Molecular Formula: $C_{44}H_{69}NO_{12}.H_2O$
Molecular Weight: 822.03

Percent Composition: C 64.29%, H 8.71%, N 1.70%, O 25.30%
Properties: Colorless prisms from acetonitrile, mp 127-129°. $[\alpha]_D^{23}$ -84.4° (c = 1.02 in chloroform). Sol in methanol, ethanol, acetone, ethyl acetate, chloroform, diethyl ether; sparingly sol in hexane, petroleum ether. Insol in water. LD_{50} i.p. in mice: >200 mg/kg (Kino). LD_{50} in male, female rats (mg/kg): 57.0, 23.6 i.v.; 134, 194 orally (Ohara).
Therapeutic Category: Immunosuppressant.

Monograph number: 08202
Title: Rapamycin
CAS Registry Number: 53123-88-9
Additional Names: Sirolimus ; RAPA; RPM
Manufacturers' Codes: AY-22989 ; NSC-226080
Trademarks: Rapamune (Wyeth)
Molecular Formula: $C_{51}H_{79}NO_{13}$
Molecular Weight: 914.17
Percent Composition: C 67.01%, H 8.71%, N 1.53%, O 22.75%
Literature References: Triene macrolide antibiotic isolated from *Streptomyces hygroscopicus.* Name derived from the native word for Easter Island, Rapa Nui. Isoln: S. N. Sehgal *et al.*, **DE** 2347682; *eidem,* **US** 3929992 (1974, 1975 both to Ayerst McKenna Harrison); purification and characterization: C. Vézina *et al., J. Antibiot.* **28,** 721 (1975); S. N. Sehgal *et al., ibid.* 727. Inhibition of immune response: R. R. Martel *et al., Can. J. Physiol. Pharmacol.* **55,** 48 (1977); of graft rejection in mice: C. P. Eng *et al., Transplant. Proc.* **23,** 868 (1991). Total synthesis: K. C. Nicolaou *et al., J. Am. Chem. Soc.* **115,** 4419 (1993); D. Romo *et al., ibid.* 7906. Series of articles on therapeutic monitoring and pharmacokinetics: *Clin. Ther.* **22**, Suppl. 2, B1-B132 (2000); on pharmacology and clinical experience in transplantation: *Transplant. Proc.* **35**, Suppl. 1, S1-S233 (2003). Clinical trial in prevention of coronary restenosis: D. R. Holmes, Jr. *et al., Circulation* **109**, 634 (2004).



Properties: Colorless crystalline solid from ether, mp 183-185°. uv max (95% ethanol): 267, 277, 288 nm ($E^{1\%}_{1cm}$ 417, 541, 416). $[\alpha]_D^{25}$ -58.2° (methanol). Sol in ether, chloroform, acetone, methanol and DMF; very sparingly sol in hexane and petr ether. Substantially insol in water. LD_{50} in mice (mg/kg): 600 i.p.; >2,500 orally (Vézina).
Use: Tool for immunochemistry.
Therapeutic Category: Immunosuppressant; antirestenotic.